

Notes on the Diet of Three Mammals Presumed to be Extinct: the Pig Footed Bandicoot, the Lesser Bilby and the Desert Rat Kangaroo

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Introduction

Since European colonisation of Australia, a number of mammal species, particularly species of the semi-arid and arid zone woodlands have become rare or extinct. Some of these seem to have vanished forever, for a variety of reasons, including natural processes of extinction as well as the effect of Europeans on their habitat. Presumed extinct are *Chaeropus ecaudatus* the Pig-footed Bandicoot, *Macrotis leucura*, the Lesser Bilby, and *Caloprymnus campestris* the Desert Rat-kangaroo. There is little

ed samples of specimens, but they do provide some interesting data, filling gaps in existing knowledge.

Methods

Identification of insect material present in stomach/colon contents was done by the Museum's entomologists. The contents were macerated in alcohol and fragments were removed for examination and determination.

In presenting the analysis of stomach/colon contents, the main purpose is to



Fig. 1. Pig-footed Bandicoot *Chaeropus ecaudatus* from 'The Mammals of Australia'. John Gould (1845-63).

published information available on their dietary habits. The author has dissected the intestinal tract of preserved museum specimens to determine dietary contents. The results are limited as they are based on restrict-

stimulate others to examine similar contents held in their collections. It should be realised the results presented are from a very small sample. The assumptions and conclusions drawn from these samples are simply to provide some clues to the diet of the animal, and only further detailed investigations will elucidate the full dietary components.

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Species Examined

Chaeropus ecaudatus, the Pig-footed Bandicoot

One of the species which appears to have become extinct is the Pig-footed Bandicoot, (Fig. 1), formerly an inhabitant of much of inland Australia from the north-west of Victoria, south-west of New South Wales, and the deserts of South Australia, Northern Territory and Western Australia. There is only a single record of a live specimen being captured this century.

Few notes are available on its general biology. Those made by Gerard Krefft (1865) are often cited. He studied specimens caught by the aboriginal people and brought to him from environs of the Murray – Darling rivers.

The diet of Pig-footed Bandicoots was described by Krefft as being mainly herbivorous. This was based on his observations of their droppings, and on their acceptance of grasses, leaves and bulbous roots. He noted that some insects, particularly grasshoppers, were eaten, but this was the extent of their carnivorous habits, unlike those of

other bandicoots. While Sturt commented that it was partial to flesh (Sturt, 1848), Gould (1863) noted that its diet consisted of insects and their larvae, and probably some kind of vegetation.

There are a number of specimens of *Chaeropus* in museum collections. While a reasonably large representation is in the form of exhibits, skins or skeletons, there are spirit-preserved specimens in which some intestinal contents are available for study. I have examined two of the spirit preserved specimens in the research collections of the Museum of Victoria, (C469, from central Australia, C5861, from Alice Springs, Northern Territory) and analysed the contents. The faecal pellets are ovoid in shape, approximately 1.5 cm x 1.0 cm. The components of the pellets consist almost entirely of grasses, but the species could not be determined. All contents are finely chewed up and bound tightly into the pellets.

Macrotis leucura, the Lesser Bilby

This species, (Fig. 2) has been recorded on only six occasions from the deserts of



Fig. 2. Lesser Bilby *Macrotis leucura* from 'A catalogue of the Monotremata and Marsupialia in the collection of the British Museum (Natural History)' Oldfield Thomas (1888).



Fig. 3. Desert Rat-kangaroo *Caloprymnus campestris* from 'The Mammals of Australia' John Gould (1845-63).

north-eastern South Australia and south-eastern Northern Territory, where surface water is rarely available. The last specimen reported alive was found in 1931 near Cooncherie in South Australia. It is not known whether the species still survives. Johnson (1983) commented on its diet based on limited stomach contents analysis. He found that they contained large quantities of skin and fur of rodents, seeds probably from *Solanum* sp. and sand. No insect fragments could be recognised.

In the Museum of Victoria there are four spirit preserved specimens of this species. One of these (C486 from central Australia) had a full stomach and colon. The contents were extracted and analysed. The stomach contents yielded two species of ants Family Formicidae, termites of the Order Isoptera as well as another unidentifiable insect species. The colon contained Formicidae and Isoptera.

Caloprymnus campestris, the Desert Rat-kangaroo

This species, (Fig. 3) once an inhabitant of the hottest and most arid areas of Australia

was described in 1843. It was not recovered again until 1931, when a specimen was collected near Cooncherie, South Australia, and live animals sighted as late as 1935 (Finlayson, 1936).

No information is available in the literature on the food preferences of *C. campestris*. Contents of the stomach, caecum and colon were examined from a specimen (NMV C6789) collected in South Australia at Mulka via Marree in 1932. Beetles, Order Coleoptera were present throughout. There was the possibility of the occurrence of weevils, Family Curculionidae as well as members of the Family Tenebrionidae, however the material was too finely digested to enable further identification.

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Blackburn Lake Sanctuary

The Day Group recently had an excursion to the Lake and were pleasantly surprised at the improvements since our last visit in 1980. This time our leader had arranged for our group to visit the Information Center, a new addition since our last trip to the Park. The Information Center with all amenities is built in the Northern section along Central Road and has a large picnic and play ground area surrounded by native trees planted in abundance to attract and provide food for native birds. A car park is provided for visitors.

Mrs. Dorothy Meagher, the Education Program Co-ordinator has been the prime mover in the formation of "The Friends of the Lake" who are a group of enthusiasts involved in giving talks to the thousands of children who visit the Lake, to arouse an interest in the Flora and Fauna of the Park and the need to protect them. The "Friends of the Lake" guide groups around the tracks to show the various plants and the need to walk only along the tracks provided.

The Information Center has photographs of the early history of the Park and displays of the Birds, Animals and Plants to be seen in the area, there is also an audio-visual unit that shows the story of the Park with a commentary.

Back in 1975 Mr. Roy Wheeler, the well known ornithologist led our Group around the Lake and he said then, that next to the Botanical Gardens

the Blackburn Lake was the best place around Melbourne to see birds. Today up to 180 species have been recorded for the area. At first the official Park consisted of 5.8 hectares, in 1976 a further 13.4 hectares were purchased and finally another 6.6 were added in 1980. The whole area is now the Blackburn Lake Sanctuary and is owned by the City of Nunawading. It is a credit to those ardent people who have striven over many years to enlarge and improve the area and to also make it a popular recreation park and an attraction as it was many years ago when train loads of Melbourne people went to enjoy Blackburn Lake.

A practical use is made of the Lake by the M.M.B.W., the Lake is used as a retarding basin to stop flash floods from the upstream area flooding the area of Gardiners Creek lower down.

Any member of the F.N.C.V. interested in Birds or Botany should visit the Blackburn Lake, it is easy to get to. See the Melway Map Ref. 48 C-11.

Take the train to Blackburn Station then walk one kilometre to the Park entrance in Central Road or catch No. 736 bus on the South side of the station right to the Park gate.

Anyone wishing to know about the Blackburn Lake Sanctuary or "The Friends of the Lake" can telephone Mrs. Dorothy Meagher 873 2619.

(D. E. McInnes, Sect. Day Group)

Proposed Management Plan for Wychitella Flora and Fauna Reserve

The Department of Conservation Forests and Lands has prepared a Resource Inventory and proposed management Plan for the Wychitella Flora and Fauna Reserve. The Reserve is of statewide significance, containing a population of Mallee Fowl and its equally rare and endangered habitat.

The Resource Inventory describes the natural and cultural values of the reserve. The DCFL invites public comment on the Resource Inventory and Management Plan, copies of which are available (4.00 or \$6.00 posted) from the Information Centre, DCFL, 240 Victoria Pde., East Melbourne 3001.